



Realize Production Potential

Zedi US Inc
541 E. Garden Dr. Unit O
Windsor, CO 80550
970-460-0055

Client: Thurmond-McGlothlin

Zedi US Inc

Analysis Date: 1/13/2017

Sample ID: Sack 21-4-12HC

Date Sampled: 1/12/2017

Unique #: NI

Purpose: NI

Sample Temperature: 90.6 DEG F

Sample Pressure: 50 PSI

Sampled By: Wes Rogers

Type Sample: Spot

County: NI

Components	Mole %	Weight %	Liq. Vol. %
Carbon Dioxide.....	1.9114	3.329	1.571
Nitrogen.....	0.4538	0.503	0.240
Methane.....	65.3005	41.455	53.323
Ethane.....	15.5522	18.506	20.034
Propane.....	9.2930	16.216	12.332
iso-Butane.....	1.2194	2.805	1.922
n-Butane.....	3.3094	7.612	5.025
iso-Pentane.....	0.7601	2.170	1.339
n-Pentane.....	0.8826	2.520	1.541
Cyclopentane.....	0.0570	0.158	0.081
n-Hexane.....	0.2299	0.784	0.455
Cyclohexane.....	0.0383	0.128	0.063
Other Hexanes	0.2834	0.966	0.561
Heptanes.....	0.3948	1.565	0.877
Methylcyclohexane.....	0.0881	0.342	0.170
2,2,4-Trimethylpentane...	0.0004	0.002	0.001
Benzene.....	0.0283	0.087	0.038
Toluene.....	0.0590	0.215	0.095
Ethylbenzene.....	0.0082	0.034	0.015
Xylenes.....	0.0284	0.119	0.053
Octanes.....	0.0718	0.325	0.177
Nonanes.....	0.0200	0.102	0.054
Decanes+.....	0.0100	0.056	0.030
Totals	100.000	100.000	100.000

ADDITIONAL BETX DATA

Components	Mole %	Weight %	Liq. Vol. %
Cyclopentane	0.057	0.158	0.081
Cyclohexane	0.038	0.128	0.063
2-Methylpentane	0.178	0.608	0.353
3-Methylpentane	0.105	0.358	0.208
n-Hexane	0.230	0.784	0.455
Methylcyclohexane	0.088	0.342	0.170
2,2,4-Trimethylpentane	0.000	0.002	0.001
Benzene	0.028	0.087	0.038
Toluene	0.059	0.215	0.095
Ethylbenzene	0.008	0.034	0.015
m-Xylene	0.005	0.019	0.008
p-Xylene	0.019	0.081	0.036
o-Xylene	0.005	0.020	0.009

SPECIFIC GRAVITY @ 60/60 F, calculated.....	0.8725
TOTAL GPM (Ethane Inclusive).....	9.272
CALCULATED BTU / REAL CF @ 14.73 PSIA, dry basis.....	1458.244
CALCULATED BTU / REAL CF @ 14.73 PSIA, wet basis.....	1433.605
AVERAGE MOLECULAR WEIGHT.....	25.270
MOLAR MASS RATIO.....	0.8711
RELATIVE DENSITY (G x Z (Air) / Z), calculated.....	0.8772
IDEAL GROSS HEATING VALUE, BTU / IDEAL CF @ 14.69% PSIA.....	1447.031
COMPRESSIBILITY FACTOR (Z).....	0.99459

PROPANE GPM	2.5537
BUTANE GPM	1.4387
GASOLINE GPM (PENTANE AND HEAVIER)	1.1314
TOTAL ACID GAS MOLE %.....	1.9114
VOC WEIGHT FRACTION	0.360

NOTATION: ALL CALCULATIONS PERFORMED USING PHYSICAL CONSTANTS FROM GPA 2145-09, THE TABLES OF PHYSICAL CONSTANTS FOR HYDROCARBONS AND OTHER COMPOUNDS OF INTEREST TO THE NATURAL GAS INDUSTRY.